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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,118	07/27/1999	HISASHI WATANABE	Q55086	5143

7590

11/14/2002

SUGHRUE MION ZINN MACPEAK & SEAS  
2100 PENNSYLVANIA AVENUE  
WASHINGTON, DC 200373213

EXAMINER

FIORILLA, CHRISTOPHER A

ART UNIT

PAPER NUMBER

1731

22

DATE MAILED: 11/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/361,118

Applicant(s)

WATANABE ET AL.

Examiner

Christopher A. Fiorilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. In view of the Appeal Brief filed on 8/29/02, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below in addition to the previous rejection.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. The abstract of the disclosure is objected to because it contains legal phraseology (i.e. “comprises” – lines 2,12,and 13). Correction is required. See MPEP § 608.01(b).

3. Claims 9-12 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 10.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohri et al. (5,672,554) in view of either one of Huang (4,919,868) or Ali et al. (5,688,450).

Mohri et al. teaches a method of producing a polycrystalline alumina sintered body. The process disclosed by Mohri et al. includes the steps of:

- forming a powder from alpha alumina and solvent;
- mixing the slurry;
- drying and forming the slurry; and
- sintering the slurry in air at the claimed temperatures.

Mohri et al. also discloses the addition of a sintering aid, such as MgO, to the alumina and discloses the claimed powder characteristics. Note that the powder purity levels disclosed by Mohri et al. encompass the claimed range

Huang and Ali et al. disclose mixing a slurry of powder and solvent via ultrasonic energy. See col. 3, line 22, of Huang and col. 5, line 1 of Ali et al. It would have been obvious to one

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having ordinary skill in the art at the time of the invention to use this mixing technique in the process of Mohri et al. in view of the statement therein that mixing can be carried out in any conventional manner (see col. 6, line 31).

Note that with respect to the limitation reciting a particle with substantially no fractured surface, this limitation reads on the presence of a single particle having no fracture surface. It is submitted that it is notoriously well known in the art that during mixing or milling some particles are unchanged and thus no fracture surfaces exist.

Determination of the specific pore sizes, density and ingredient amounts would have been well within the realm of routine experimentation to one having ordinary skill in the art at the time of the invention. These parameters would have obviously been selected to optimize the process conditions and/or the properties of the final product.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohri et al. (5,672,554) in view of Aihara et al. (6,258,440) and *Dictionary of Ceramic Science and Engineering* by O'Bannon.

Mohri et al. teaches a method of producing a polycrystalline alumina sintered body. The process disclosed by Mohri et al. includes the steps of:

- forming a powder from alpha alumina and solvent;
- mixing the slurry;
- drying and forming the slurry; and
- sintering the slurry in air at the claimed temperatures.

Mohri et al. also discloses the addition of a sintering aid, such as MgO, to the alumina and discloses the claimed powder characteristics. Note that the powder purity levels disclosed by Mohri et al. encompass the claimed range

Aihara et al. discloses mixing a slurry of alumina powder and solvent by mechanical stirring not using a grinding medium (i.e. mixing in a trommel). See col. 5, lines 20-25. It would have been obvious to one having ordinary skill in the art at the time of the invention to use this mixing technique in the process of Mohri et al. in view of the statement therein that mixing can be carried out in any conventional manner (see col. 6, line 31). Note that the alumina powder of Aihara et al. also lies within the particle size claimed in claim 1.

*Dictionary of Ceramic Science and Engineering* by O'Bannon defines a trommel as a tilted, revolving, cylindrical screen used to separate coarsely crushed materials. Thus a trommel has no grinding medium.

Note that with respect to the limitation reciting a particle with substantially no fractured surface, this limitation reads on the presence of a single particle having no fracture surface. It is submitted that it is notoriously well known in the art that during mixing or milling some particles are unchanged and thus no fracture surfaces exist.

Determination of the specific pore sizes, density and ingredient amounts would have been well within the realm of routine experimentation to one having ordinary skill in the art at the time of the invention. These parameters would have obviously been selected to optimize the process conditions and/or the properties of the final product.

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8. Applicant's arguments filed 8/29/02 have been fully considered but they are not persuasive.

Note that the arguments filed 8/29/02 are not persuasive for the reasons as stated in the final rejection mailed 11/29/01.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is 703-308-0674. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



**Christopher A. Fiorilla**  
**Primary Examiner**  
**Art Unit 1731**

caf  
November 13, 2002